

## ABSTRACT OF DISCLOSURE

A brightness control apparatus comprising a probability density function (PDF) calculator to calculate a PDF based on pixel values of respective pixels of an input image signal, a first setter to set an upper limit value and a lower limit value with respect to the pixel values that are equal to or smaller than a predetermined level in the PDF, and a brightness value controller to calculate a cumulative distribution function for the PDF controlled by the upper and lower limit values set by the first setter, and calculating brightness levels corresponding to the input image signal based on the calculated cumulative distribution function. The brightness control apparatus controls the brightness of an image signal so as to prevent it from becoming unnecessarily bright or dark when compensating the brightness of an image signal, while also preventing degradation of contrast.